

I. AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A system for configuring security software on a computer network, the system comprising:

a database engine providing deduction, wherein the database engine applies logic reasoning to data from a plurality of databases to deduce detailed security rules for network devices based on a general security meta policy for the network, wherein the plurality of databases comprises:

a network information database associated with the database engine and providing a central repository for a configuration of hardware and software installed on the network; and
a security goal database associated with the database engine and describing uses that the hardware and software installed on the network are permitted to support.

2. (Currently Amended) The system of claim 1, wherein the plurality of databases further comprising comprises:

an event database associated with the database engine and containing events related to the network, wherein such events include benign network events, suspected network attacks, and actual network attacks.

3. (Previously Presented) The system of claim 1, wherein the database engine is an object-oriented description logic database engine.

4. (Currently Amended) A configuration tool implemented on a computer-readable medium for use in configuring security software packages on a computer network, the configuration tool comprising:

a description logic database engine, wherein the description logic database engine applies logic reasoning to data from a plurality of databases to deduce detailed security rules for network devices based on a general security meta policy for the network, wherein the plurality of

databases comprises (i) a network information database associated with the description logic database engine and providing a central repository for a configuration of hardware and software installed on the network; and (ii) a security goal database associated with the description logic database engine and providing security goals describing uses that the hardware and software of the network are permitted to support;

a first configuration module coupled to the description logic database engine for configuring intrusion blocking security software packages; and

a second configuration module coupled to the description logic database engine for configuring intrusion detecting security software packages;

wherein the first configuration module configures the intrusion blocking security software packages based on the configuration of the hardware and software installed on the network and the security goals; and

wherein the second configuration module configures the intrusion detecting security software packages based on the configuration of the hardware and software installed on the network and the security goals.

5. (Previously Presented) The configuration tool implemented on a computer-readable medium of claim 4, further comprising:

an event database associated with the description logic database engine and containing events related to the network.

6. (Previously Presented) The configuration tool implemented on a computer-readable medium of claim 5, wherein the events contained in the event database include benign network events, suspected network attacks, and actual network attacks.

7. (Previously Presented) The configuration tool implemented on a computer-readable medium of claim 4, further comprising:

a system hardening module coupled to the description logic database engine for automating a process of hardening the network.

8. (Previously Presented) The configuration tool implemented on a computer-readable medium of claim 7, wherein the system hardening module is context sensitive.

9. (Previously Presented) The configuration tool implemented on a computer-readable medium of claim 4, further comprising:

an audit configuration module coupled to the description logic database engine for probing the network for vulnerabilities.

10. (Currently Amended) A configuration tool implemented on a computer-readable medium for use in configuring security software packages on a computer network, the configuration tool comprising:

a description logic database engine, wherein the description logic database engine applies logic reasoning to data from a plurality of databases to deduce detailed security rules for network devices based on a general security meta policy for the network, wherein the plurality of databases comprises (i) a network information database associated with the description logic database engine and providing a central repository for a configuration of hardware and software installed on the network; (ii) a security goal database associated with the description logic database engine and providing security goals describing uses that the hardware and software of the network are permitted to support; and (iii) an event database associated with the description logic database engine and containing events related to the network, wherein the events contained in the event database include benign network events, suspected network attacks, and actual network attacks;

a first configuration module coupled to the description logic database engine for configuring intrusion blocking security software packages;

a second configuration module coupled to the description logic database engine for configuring intrusion detecting security software packages;

a system hardening module coupled to the description logic database engine for automating a process of hardening the network; and

an audit configuration module coupled to the description logic database engine for probing the network for vulnerabilities;

wherein the first configuration module configures the intrusion blocking security software packages based on the configuration of the hardware and software installed on the network and the security goals;

wherein the second configuration module configures the intrusion detecting security software packages based on the configuration of the hardware and software installed on the network and the security goals; and

wherein the system hardening module is context sensitive.

11. (Currently Amended) A method for configuring a security software package installed on an individual network device, the method comprising:

~~using active inference in a database engine to decompose one or more security policies for a class of network devices into one or more security goals for the individual network device, wherein the individual network device is a member of the class of network devices; and~~

using a database engine applying logic reasoning to data from a plurality of databases to deduce one or more security goals for a class of network devices comprising the individual network device, wherein the one or more security goals is based on a general security meta policy for a network comprising the individual network device; and

configuring the security software package using the one or more security goals.

12. (Previously Presented) The method of claim 11, ~~wherein using active inference further comprises automatically classifying~~ further comprising using a database engine applying logic reasoning to classify the individual network device based on an IP address, a network

topology or a service provided by the individual network device, and applying rules to the individual network device based on its classification.

13. (Previously Presented) The method of claim 11, wherein the database engine is an object-oriented description logic database engine.

14. (Previously Presented) The method of claim 11, wherein the security software package is selected from the group consisting of an intrusion blocking software package and an intrusion detecting software package.

15. (Currently Amended) A method for configuring a security software package installed on an individual network device, the method comprising:
using active inference in an object-oriented description logic database engine, wherein active inference comprises applying logic reasoning to data from a plurality of databases to deduce one or more security goals for a class of network devices comprising the individual network device, wherein the one or more security goals is based on a general security meta policy for a network comprising the individual network device to decompose one or more security policies for a class of network devices into one or more security goals for the individual network device, wherein the individual network device is a member of the class of network devices; and
configuring the security software package using the one or more security goals;
wherein the security software package is selected from the group consisting of an intrusion blocking software package and an intrusion detecting software package.

16. (Previously Presented) The method of claim 15, wherein using active inference further comprises automatically classifying the individual network device based on an IP address, a network topology and one or more services the individual network device provides, and applying rules to the individual network device based on its classification.

17. (Currently Amended) A method for configuring a security software package, the method comprising:

defining one or more security policies for a class of network devices, wherein the security software package is a service running on at least one network device of the class of network devices;

using a database engine providing deduction ~~to decompose the one or more security policies for the class of network devices into one or more security goals; to apply logic reasoning to data from a plurality of databases to deduce one or more security goals for the class of~~ network devices comprising the network device, wherein the one or more security goals is based on a general security meta policy for a network comprising the network device;

using the database engine providing deduction to associate the one or more security goals with the at least one network device; and

configuring the security software package on the at least one network device using the one or more security goals.

18. (Previously Presented) A method for configuring security software packages, comprising:

generating a first database containing a configuration of hardware devices and software packages installed on a network, wherein the software packages include the security software packages;

defining classes of hardware devices installed on the network;
~~automatically classifying using a database engine providing deduction to apply logic reasoning to data from the first database to classify each of the hardware devices into one of the classes of hardware devices using a database engine providing deduction;~~

generating a second database containing ~~first security goals~~ a general security meta policy for the network;

~~decomposing the first security goals into second security goals for individual hardware devices using the database engine and the configuration of the hardware devices and the software packages installed on the network; and~~

using the database engine providing deduction to apply logic reasoning to data from the first and second databases to deduce one or more security goals for the individual network device, wherein the one or more security goals is based on the general security meta policy; and

configuring each of the security software packages using the ~~second~~ one or more security goals.

19. (Currently Amended) The method of claim 18, wherein generating a second database containing ~~first security goals~~ a general security meta policy further comprises generating ~~a second database containing first security goals~~ for each class of hardware devices.

20. (Currently Amended) The method of claim 19, wherein ~~decomposing the first security goals into second security goals for individual hardware devices~~ using the database engine providing deduction to apply logic reasoning to data from the first and second databases to deduce one or more security goals for the individual network device further comprises using inference to associate the ~~second~~ one or more security goals with individual hardware devices within each class of hardware devices.